

REMARKS

Claims 1 and 4-25 are pending. The Office Action dated April 1, 2004 in this Application has been carefully considered. The above amendments and the following remarks are presented in a sincere attempt to place this Application in condition for allowance. Claim 1 has been amended in this Response. Claims 2 and 3 have been cancelled in this Response. Claims 6-25 have been determined by the Examiner to be in condition for the allowance. Applicant thanks the Examiner. Reconsideration and allowance are respectfully requested in light of the above amendments and following remarks for those Claims not considered to be in condition for allowance.

An interview was held with the Examiner, Ms. Linh Nguyen, on May 3, 2004 to discuss the rejections under U.S.C. §102(b) and the proposed amendments thereto. Applicant wishes to thank the Examiner for the courtesies extended.

Claim 1 stands rejected under 35 U.S.C. §112, second paragraph, for assertedly being indefinite by having terms that lack a proper antecedent basis. Insofar as it may be applied against the Claim, this rejection is deemed overcome.

Rejected independent Claim 1 as now amended more particularly recites the present invention. In line 6, "a phase error signal" has been replaced with --the phase error signal--. In line 4, "a reference signal" and "a feedback signal" have been replaced with --the reference signal-- and --the feedback signal--, respectively. Accordingly, Applicant respectfully requests that the rejection of amended Claim 1 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claim 1 stands rejected under 35 U.S.C. §102(b) in view of U.S. Patent Application Publication No. 2001/0016476 to Kasahara et al. ("Kasahara"). Insofar as it may be applied against the Claim, this rejection is deemed overcome.

Rejected independent Claim 1 as now amended more particularly recites one of the distinguishing characteristics of the present invention, namely, “generating the phase error signal, *at least based on the reference signal and the feedback signal*, using a phase error detector circuit, *wherein the phase error detector circuit further comprises a first and second dynamic AND circuit*; and resetting the input circuit and, after a delay, resetting the phase error detector circuit, *wherein the amount of delay is variable and is used to select an appropriate amount of delay to reduce a dead zone to less than one picosecond, and wherein the amount of delay is variable from 5% to 25% of the period of the reference signal.*” (Emphasis added.) Support for this Amendment can be found, among other places, Figure 1 and page 6, lines 2-24 of the original Application.

Kasahara does not suggest, teach, or disclose the specific logic operations to generate a phase error signal. Specifically, Kasahara suggests, teaches, or discloses the generation of a phase error signal in conjunction with a phased locked loop. Kasahara utilizes a phase comparator box to disclose the generation of a phase error signal, but there is no detail to suggest a limitation of the dead zone of a phase/frequency detector. In limiting the dead zone of a phase/frequency detector by the generation of a phase error signal as defined in the present invention of Claim 1, jitter introduced into a phase locked loop is reduced while allowing the phase/frequency detector to operate at high frequencies.

In view of the foregoing, it is apparent that the cited reference does not disclose, teach or suggest the unique combination now recited in amended Claim 1. Applicant therefore submits that amended Claim 1 is clearly and precisely distinguishable over the cited reference in a patentable sense, and is therefore allowable over this reference and the remaining references of record. Accordingly, Applicant respectfully requests that the rejection of amended Claim 1 under 35 U.S.C. § 102(b) in view of Kasahara be withdrawn and that Claim 1 be allowed.

Claims 4 and 5 stand rejected under 35 U.S.C. §103(a) in view of Kasahara. Insofar as they may be applied against the Claims, these rejections are deemed overcome.

Claims 4 and 5 depend on and further limit Claim 1. Hence, for at least the aforementioned reasons, these Claims would be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of the dependent Claims 4 and 5 also be withdrawn.

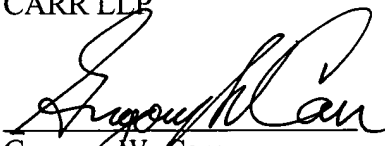
Applicant has now made an earnest attempt to place this Application in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1 and 4-25.

Applicant does not believe that any fees are due; however, in the event that any fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605 of CARR LLP.

Should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

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